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Maryland

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19 February 2020

The Honorable Paul Pinsky
Chair of the Education Health and Environmental Affairs Committee
2 West
Miller Senate Office Building
Annapolis, Maryland 21401

Re: Letter of Support for SB 0592
State-Funded Construction and Major Renovation Projects-Solar Panels-Requirement

Dear Chairman Pinsky and members of the EHEA Committee:

On behalf of AIA Maryland and the nearly 2,000 Architects we represent, we fully support sustainable strategies in building design and construction as we collectively work to lessen our impact on the natural world. We support the intent of this bill, however we believe aspects of the bill need revisions, and in our opinion, implementation of solar strategies like these may be more successful through an alternate path, such as adopting appendix CA (Solar-Ready Zone – Commercial) of the International Energy Conservation Code.

As written, we believe that the IECC appendix CA addresses some of these issues better.

1. The size threshold is not necessary as it may preclude small buildings that would be viable candidates, but height limitations such as 5 stories or less in height above grade plane and assessing that a building roof area that is not shaded for more than 70 percent of daylight hours annually is an important component.
2. We believe including a roof replacement in the criteria for being solar ready does make sense. Most solar panels for power generation weigh only a little over 2 pounds/sf and rarely does that require additional structure. Providing brackets for attachment that can be waterproofed during a roof replacement makes most sense, rather than eliminating that option.
3. The Solar-ready zone area identified in the IECC appendix CA addresses the “obstruction” language of the proposed definition for components like skylights and mechanical equipment. We believe it establishes a practical criteria for this zone.
4. “Roof Expanse” refers only to flat roofs in this bill definition, but it should include low slope roofs too, provided that they have the proper orientation.
5. This bill does not provide for an interconnection pathway for routing of conduit to the electrical service panel and the IECC appendix CA does. If we truly plan to use the roof for solar collection, it should be an integral part of planning.

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6. This bill does not provide for Electrical service reserved space in the main electrical service panel. Particularly if infrastructure changes are being made, such space should be included in electrical systems design and that should be labeled as “for future solar electric”.

I have attached the IECC Appendix CA for reference.

We support the state leading by example and considering how to make state funded construction more sustainable. We support the planning and use of rooftop panels as a means of providing renewable energy for state funded buildings. We encourage the use of a cross-disciplinary and vetted regulation such as IECC for establishing criteria that we hope to proceed to public regulatory process as it is in other jurisdictions. We support the intent of SB0592 and would be happy to participate in a workgroup to streamline efficient implementation of solar-ready roof design guidelines for publicly funded buildings.

Sincerely,

A handwritten signature in black ink, appearing to read 'C. Parts', with a long horizontal line extending to the right from the end of the signature.

Chris Parts, AIA
Director, Past President, AIA Maryland

cc:

Education, Health and Environmental Affairs Committee:

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APPENDIX CA

SOLAR-READY ZONE—COMMERCIAL

The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.

User note:

About this appendix: Appendix CA is intended to encourage the installation of renewable energy systems by preparing buildings for the future installation of solar energy equipment, piping and wiring.

SECTION CA101 SCOPE

CA101.1 General. These provisions shall be applicable for new construction where solar-ready provisions are required.

SECTION CA102 GENERAL DEFINITION

SOLAR-READY ZONE. A section or sections of the roof or building overhang designated and reserved for the future installation of a solar photovoltaic or solar thermal system.

SECTION CA103 SOLAR-READY ZONE

CA103.1 General. A solar-ready zone shall be located on the roof of buildings that are five stories or less in height above grade plane, and are oriented between 110 degrees and 270 degrees of true north or have low-slope roofs. Solar-ready zones shall comply with Sections CA103.2 through CA103.8.

Exceptions:

1. A building with a permanently installed, on-site renewable energy system.
2. A building with a solar-ready zone that is shaded for more than 70 percent of daylight hours annually.
3. A building where the licensed design professional certifies that the incident solar radiation available to the building is not suitable for a solar ready zone.
4. A building where the licensed design professional certifies that the solar zone area required by Section CA103.3 cannot be met because of extensive rooftop equipment, skylights, vegetative roof areas or other obstructions.

CA103.2 Construction document requirements for a solar-ready zone. Construction documents shall indicate the solar-ready zone.

CA103.3 Solar-ready zone area. The total solar-ready zone area shall be not less than 40 percent of the roof area calculated as the horizontally projected gross roof area less the area covered by skylights, occupied roof decks, vegetative roof areas and mandatory *access* or set back areas as required by the *International Fire Code*. The solar-ready zone shall be a single area or smaller, separated sub-zone areas. Each sub-

zone shall be not less than 5 feet (1524 mm) in width in the narrowest dimension.

CA103.4 Obstructions. Solar ready zones shall be free from obstructions, including pipes, vents, ducts, HVAC equipment, skylights and roof-mounted equipment.

CA103.5 Roof loads and documentation. A collateral dead load of not less than 5 pounds per square foot (5 psf) (24.41 kg/m²) shall be included in the gravity and lateral design calculations for the solar-ready zone. The structural design loads for roof dead load and roof live load shall be indicated on the construction documents.

CA103.6 Interconnection pathway. Construction documents shall indicate pathways for routing of conduit or piping from the solar-ready zone to the electrical service panel or service hot water system.

CA103.7 Electrical service reserved space. The main electrical service panel shall have a reserved space to allow installation of a dual-pole circuit breaker for future solar electric installation and shall be labeled "For Future Solar Electric." The reserved space shall be positioned at the end of the panel that is opposite from the panel supply conductor connection.

CA103.8 Construction documentation certificate. A permanent certificate, indicating the solar-ready zone and other requirements of this section, shall be posted near the electrical distribution panel, water heater or other conspicuous location by the builder or registered design professional.